



# *Pedestrian* IMPROVEMENTS



## PROJECT STATUS AND MEDIAN SAFETY INITIATIVES UPDATE

US 13, US 40 TO MEMORIAL DRIVE  
PEDESTRIAN IMPROVEMENTS

CONTRACT NO. T201601102

AGREEMENT 1710 – TASK 1.1

Delaware Pedestrian Council Meeting - July 24, 2018

***Pennoni***

PARTNERS FOR WHAT'S POSSIBLE

[www.pennoni.com](http://www.pennoni.com)

# National Pedestrian Fatality Rates

In 2016, Delaware was the 5<sup>th</sup> deadliest state for pedestrians (fatalities per capita)

## Pedestrian Traffic Fatalities by State

2017 PRELIMINARY DATA

**Table 2**  
Pedestrian Fatalities by State per 100,000 Population, 2016

Source: State Highway Safety Offices and U.S. Census Bureau

Table 2 shows the rate of pedestrian fatalities per 100,000 population by state for 2016, based on the number of pedestrian fatalities reported by the states and U.S. Census population data.

Sorted by State		Sorted by Fatality Rate	
State	Pedestrian Fatalities per 100K Population - 2016	State	Pedestrian Fatalities per 100K Population - 2016
Alabama	2.51	New Mexico	3.45
Alaska	1.62	New Mexico	3.22
Arizona	2.85	Florida	2.95
Arkansas	1.64	South Carolina	2.89
California	2.43	Arizona	<b>2.83</b>
Colorado	1.52	Nevada	2.76
Connecticut	1.79	Louisiana	2.73
Delaware	2.83	Alabama	2.51
DC	1.32	Texas	2.44
Florida	3.22	California	2.43
Georgia	2.25	Vermont	2.41
Hawaii	0.71	Georgia	2.32
Idaho	1.15	Oklahoma	2.25
Illinois	1.28	Hawaii	2.24
Indiana	0.73	North Carolina	2.00
Iowa	1.41	Mississippi	1.94
Kansas	1.69	New Jersey	1.85
Kentucky	2.73	Oregon	1.78
Louisiana	1.28	Maryland	1.73
Maine	1.28	Connecticut	1.69
		Kentucky	1.69
		Michigan	1.64
		Arkansas	1.63

## Spotlight on Highway Safety



# Pedestrian Traffic Fatalities by State

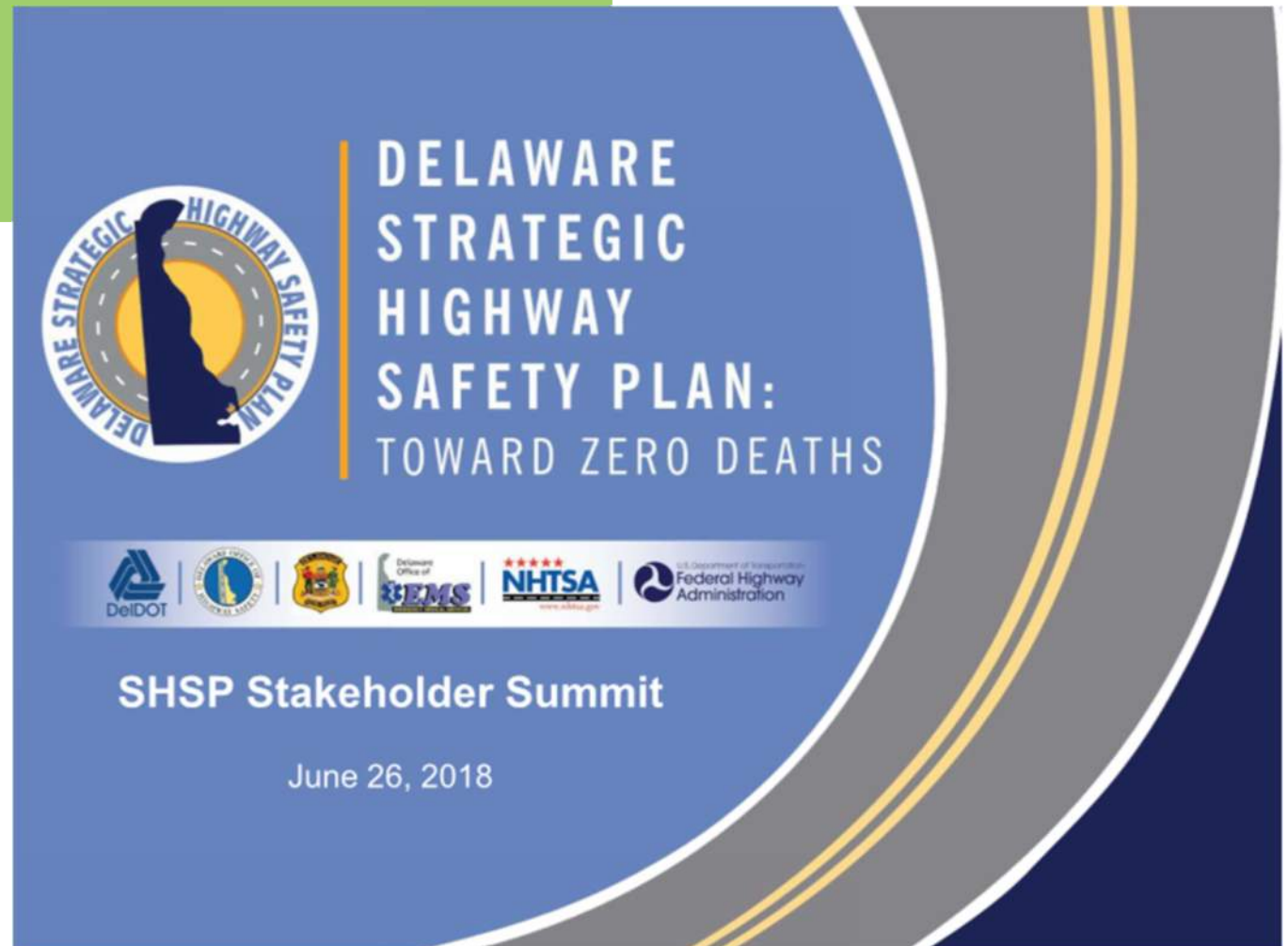
2017 PRELIMINARY DATA

Prepared for  
Governors Highway Safety Association

by Richard Retting  
Sam Schwartz Consulting



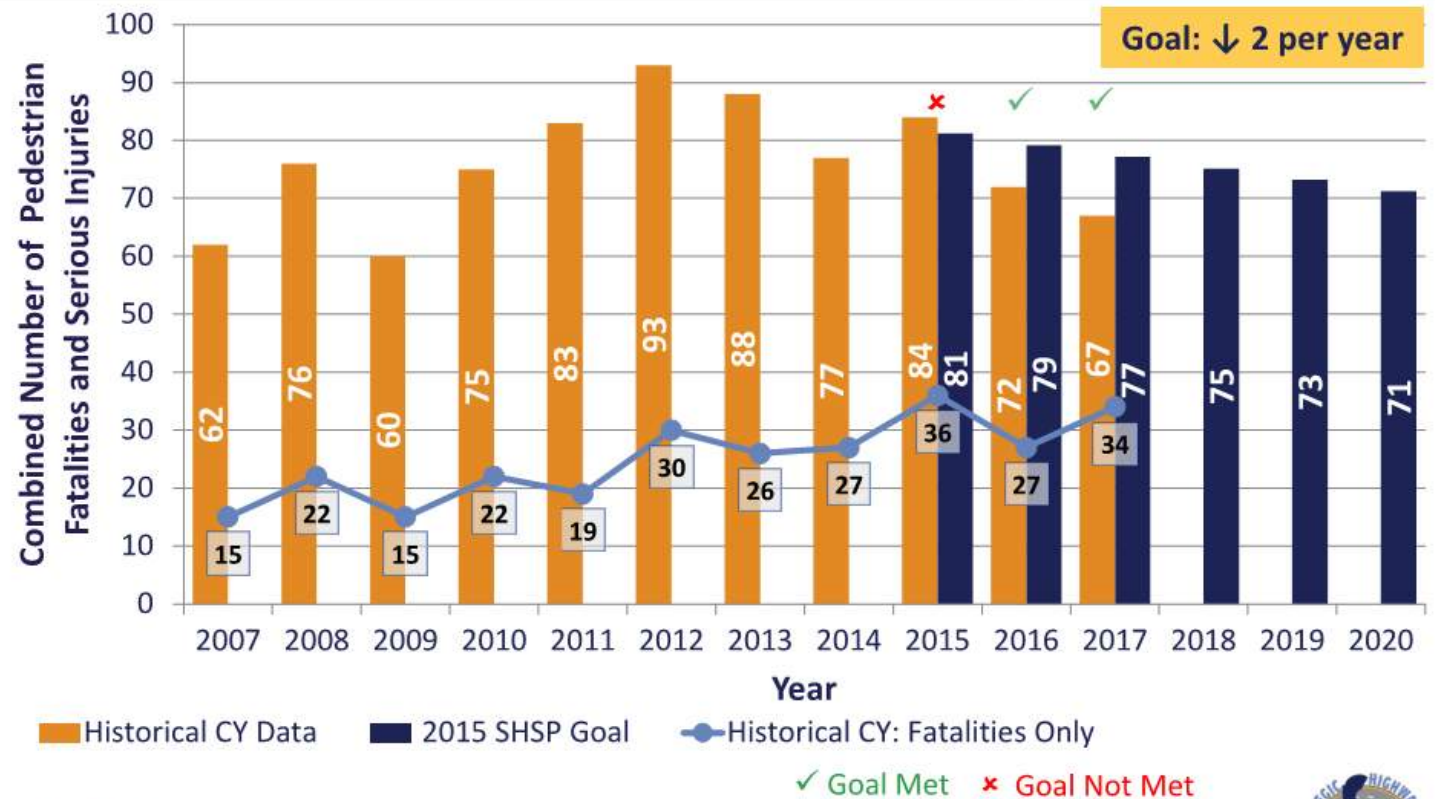
## Delaware Strategic Highway Safety Plan: Toward Zero Deaths



Source: June 26, 2018  
Strategic Highway Safety  
Plan Stakeholder Summit

# Delaware Strategic Highway Safety Plan: Toward Zero Deaths

## EA 7: Pedestrian (Combined Fatalities and Serious Injuries)



Source: June 26, 2018  
Strategic Highway Safety  
Plan Stakeholder Summit

Source: CARS





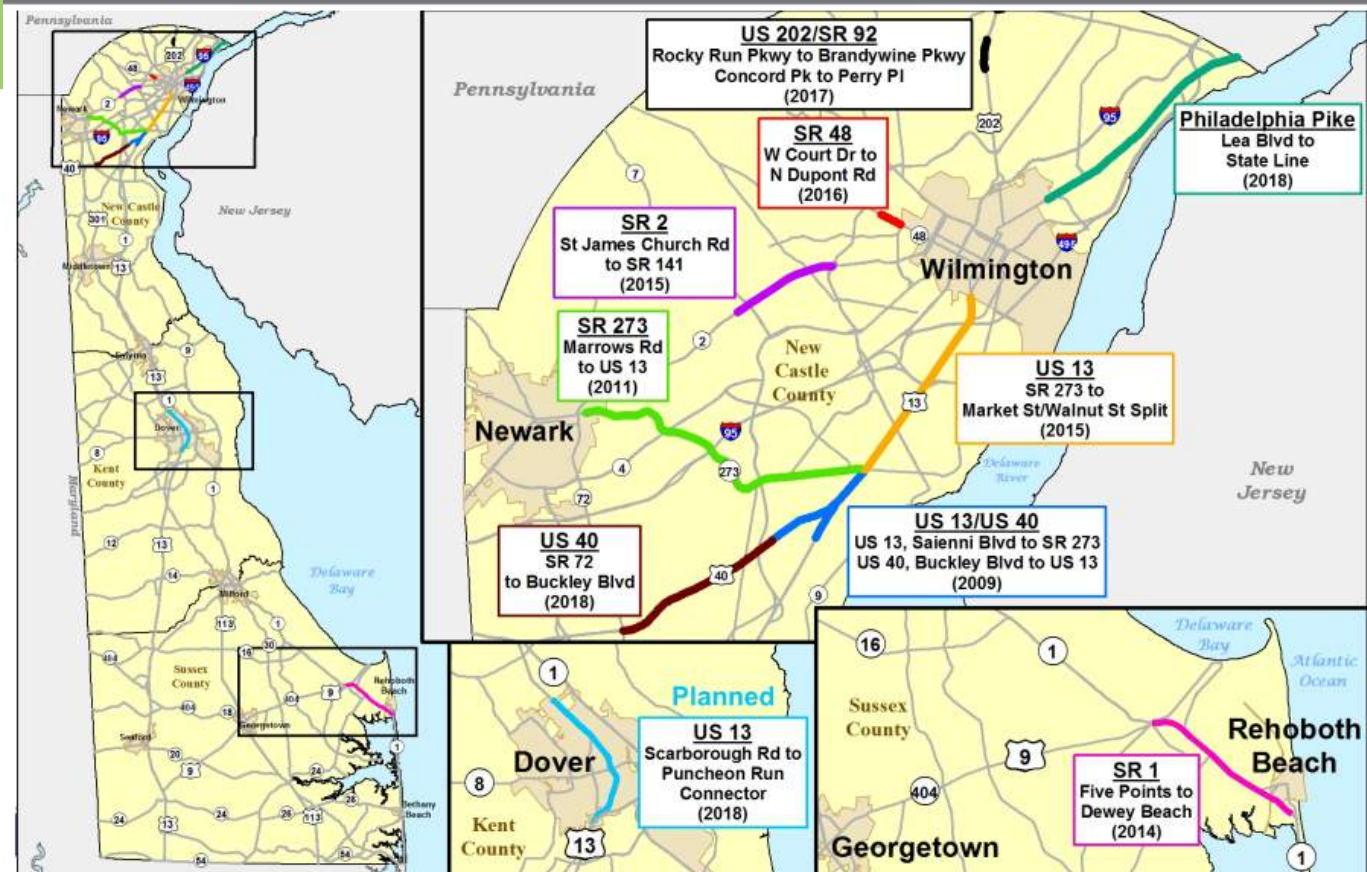
# Delaware Strategic Highway Safety Plan: Toward Zero Deaths

Source: June 26, 2018  
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Plan Stakeholder Summit



## EA 7: Pedestrians

### Pedestrian Safety Audit Locations



# Delaware Strategic Highway Safety Plan: Toward Zero Deaths

## EA 7: Pedestrians

### Pedestrian Barriers

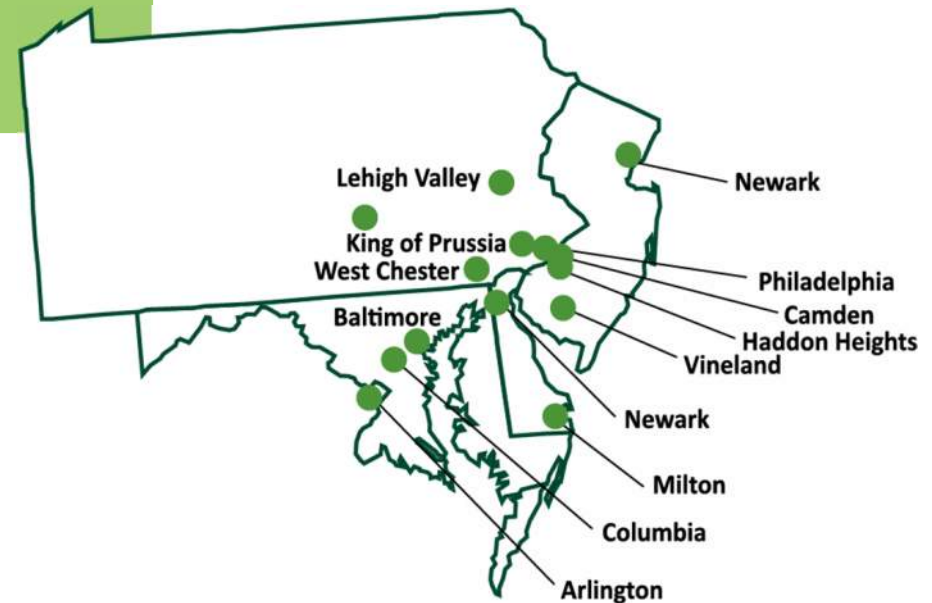
- DeIDOT is considering barrier options to prevent pedestrians from crossing midblock



Source: June 26, 2018  
Strategic Highway Safety  
Plan Stakeholder Summit

# About Pennoni

- Working with DelDOT, PennDOT, Pennsylvania Turnpike Commission, MDSHA, MDTA, VADOT, NJDOT and numerous municipalities
- DelDOT Agreement 1710 – Project Development
- DelDOT Agreement 1791 – Pedestrian Access Routes



- Newark, DE Transportation Group
  - Led by Philip Horsey
  - 25+ bridge, highway and traffic engineers

# Agenda

- The Why – Pedestrian Safety Improvements
- US 13 Corridor Progress
- Visualization Examples
- Education and Enforcement
- Median Treatments
- Q&A, Next Steps



## Delaware still top-ranked in pedestrian fatalities

Josephine Peterson, The News Journal    Published 8:00 a.m. ET May 22, 2018 | Updated 3:41 p.m. ET May 24, 2018



(Photo: Jerry Habraken, The News Journal)

*Editor's Note: The Pedestrian Safety Council last met in April, said Mitch Topal of the Office of Highway Safety. The council's website had not been updated and members had not returned phone calls about the council, before the story was published.*

Michelle Williams drove home past an intersection filled with police and firefighters at Kirkwood Highway and Duncan Road on May 11, exasperated she couldn't use the turn lane.

"I remember thinking, 'Like, are you for real?' I needed to use that turn lane that they were in to get home," Williams said.

A car with a broken windshield and a dismantled front bumper sat amidst flashing police lights and uniformed officers.

It wasn't until the next morning she found out her sister, Aquisha Williams, 30, had been fatally struck by the car.

# US 13 – A Notorious Reputation



- Delaware Strategic Highway Safety Plan: pedestrian fatalities accounted for **20%** of all traffic fatalities from 2007-2014
- Along the US 13 study corridor, pedestrian fatalities accounted for **66%** of all traffic fatalities (2007-2016)
- **13%** (31 /240) of all pedestrian fatalities in Delaware from 2007-2016 occurred within the US 13 study corridor

# Studies Available

- **2009** – US 40 to SR 273
- **2015** – SR 273 to Memorial Drive
- **2016** – US 40 to A Street
- Various Intersection Safety Studies
  - *Former Hazard Elimination Program (HEP)*
  - *Highway Safety Improvements Program (HSIP)*
- Available on DelDOT's Delaware Strategic Highway Safety Plan website

Delaware.gov

Agencies News Topics Contact

ABOUT CITIZEN BUSINESS SERVICES CONTACTS TRANSLATE

DELAWARE DEPARTMENT OF TRANSPORTATION

## Delaware Strategic Highway Safety Plan

Section Home

Information

Contact Us

Community Relations  
302.760.2080  
800.652.5600

Safety Programs Manager  
Adam Weiser, P.E., PTOE  
Division of Transportation  
Solutions - Traffic Section

### Making Walking and Street Crossing Safer

Pedestrians must consider safety, in addition to infrastructure and proximity of destination, when deciding to walk transportation alternative. Therefore, improving pedestrian safety has the potential to increase pedestrian activity, reduce congestion on Delaware's roadways. Providing livable communities, communities that provide safe and convenient transportation choices for all citizens, including pedestrians, bicyclists, transit users and motorists, are high priority in Delaware. In addition to engineering safer transportation solutions for pedestrians, educating and enforcing the public on pedestrian laws and improving driver awareness of pedestrians are also critical strategies to advance pedestrian safety.

See the Making Walking and Street Crossing Safer section of the Delaware Strategic Highway Safety Plan.

### Pedestrian Bicycle Working Group

The Delaware Department of Transportation, in conjunction with our partners at the Office of Highway Safety and Delaware State Police established the pedestrian/bicycle safety working group in February 2013 due to the number of pedestrian and bicycle related fatalities and incapacitating injury crashes in 2012. The purpose of the working group was to develop ideas and methods for improving pedestrian and bicycle safety through engineering, education, enforcement, and emergency service related activities.

### Pedestrian Safety Campaign

Pedestrian Countdown Signals Press Release - October 12, 2009

Pedestrian Countdown Signals Explained

Pedestrian Safety Brochure

OHS Pedestrian Safety Information

### US 13/US 40 Pedestrian Safety Study

During 2006, the State of Delaware experienced an unusually high number of pedestrian fatalities. Research conducted by DelDOT's Division of Planning identified several corridors within New Castle County with unusually high concentrations of pedestrian crashes including US 13, US 40, and SR 273.

The US 13 and US 40 Pedestrian Safety Study evaluated the existing pedestrian accommodations for the US 13 corridor between SR 273 (Frenchtown Road) and Salenell Boulevard and the US 40 corridor between US 13 and Buckley Boulevard. The evaluation included an extensive data collection effort including crash data, pedestrian observations and counts, intersection turning movement counts, physical inventory, DART ridership information and general observations of traffic operations and pedestrian activity, and an in-depth investigation to identify problem locations, underlying deficiencies and opportunities for improvements. Short and long-term recommendations were developed to address the problem locations. The short-term recommendations include improvements that potentially could be implemented relatively quickly, and in fact several have been implemented already. The long-term recommendations include improvements that would require additional study, coordination, public notification and/or additional funding resources. The study was completed in April 2009.

US 13/40 Photos

Improvement Recommendation: US Route 13 From DE Route 273 To Buena Vista Drive (Figure 11A)

## Next Steps *(from 8.22.17 Pedestrian Council Meeting)*

- CTP funding for construction increased from \$5M to \$20M
- Capital projects in construction by FY20
- Public Workshops
- Median fencing pilot program
- Continued education and enforcement



# Next Steps (from 8.22.17 Pedestrian Council Meeting)



CTP funding for construction increased from \$5M to \$20M

- DelDOT has \$26M allocated for construction

## US13, US40 to Memorial Drive Pedestrian Improvements

## PROJECT AUTHORIZATION SCHEDULE

IN (\$000)

PROJECT NUMBER	PHASE	FUNDING SOURCE	CURRENT ESTIMATE	FY 2018			FY 2019			FY 2020			FY 2021			STATE TOTAL	FEDERAL TOTAL
				STATE	FEDERAL	FUND TYPE	STATE	FEDERAL	FUND TYPE	STATE	FEDERAL	FUND TYPE	STATE	FEDERAL	FUND TYPE		
T201601102	PE	80% FHWA	1,000.0														
T201601102	ROW	80% FHWA	1,000.0	200.0	800.0	Z001										200.0	800.0
T201601102	C	80% FHWA	25,982.1							5,200.0	2,000.0	Z001		2,400.0	Z001*	5,200.0	4,400.0
T201601102	C	100% OTHER	17.9														
Total			28,000.0	200.0	800.0					5,200.0	2,000.0			2,400.0		5,400.0	5,200.0

Z001 - National Highway Performance Program (NHPP)

\* AC Conversion

# Next Steps (from 8.22.17 Pedestrian Council Meeting)



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Capital projects in construction by FY20

- Pennoni Received Design NTP



2018 CRBA

2019 Pavement & Rehabilitation

- ☒ Semi-Final Plans
- ☐ Final Plans - Winter 2018
- ☐ Spring / Summer Construction

2020 Pavement & Rehabilitation

- ☐ Semi-Final Plans
- ☐ Final Plans - Winter 2019
- ☐ Spring / Summer Construction\*

\* Subject to change pending I-95 Corridor Rehabilitation construction schedule



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Public Workshops

- July 24 Pedestrian Council Update

- Virtual workshop online

2018 CRBA

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Semi-Final Plans



Final Plans - Winter 2018



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Rehabilitation construction schedule

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Median fencing pilot program

- Monthly Meetings

- Preferred Alternatives

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- Monthly

- Preferred Alternatives



Continued education and enforcement

- Where we need your help!

2018 CRBA

2019 Pavement & Rehabilitation



Semi-Final Plans



Final Plans - Winter 2018



Spring / Summer Construction

2020 Pavement & Rehabilitation



Semi-Final Plans



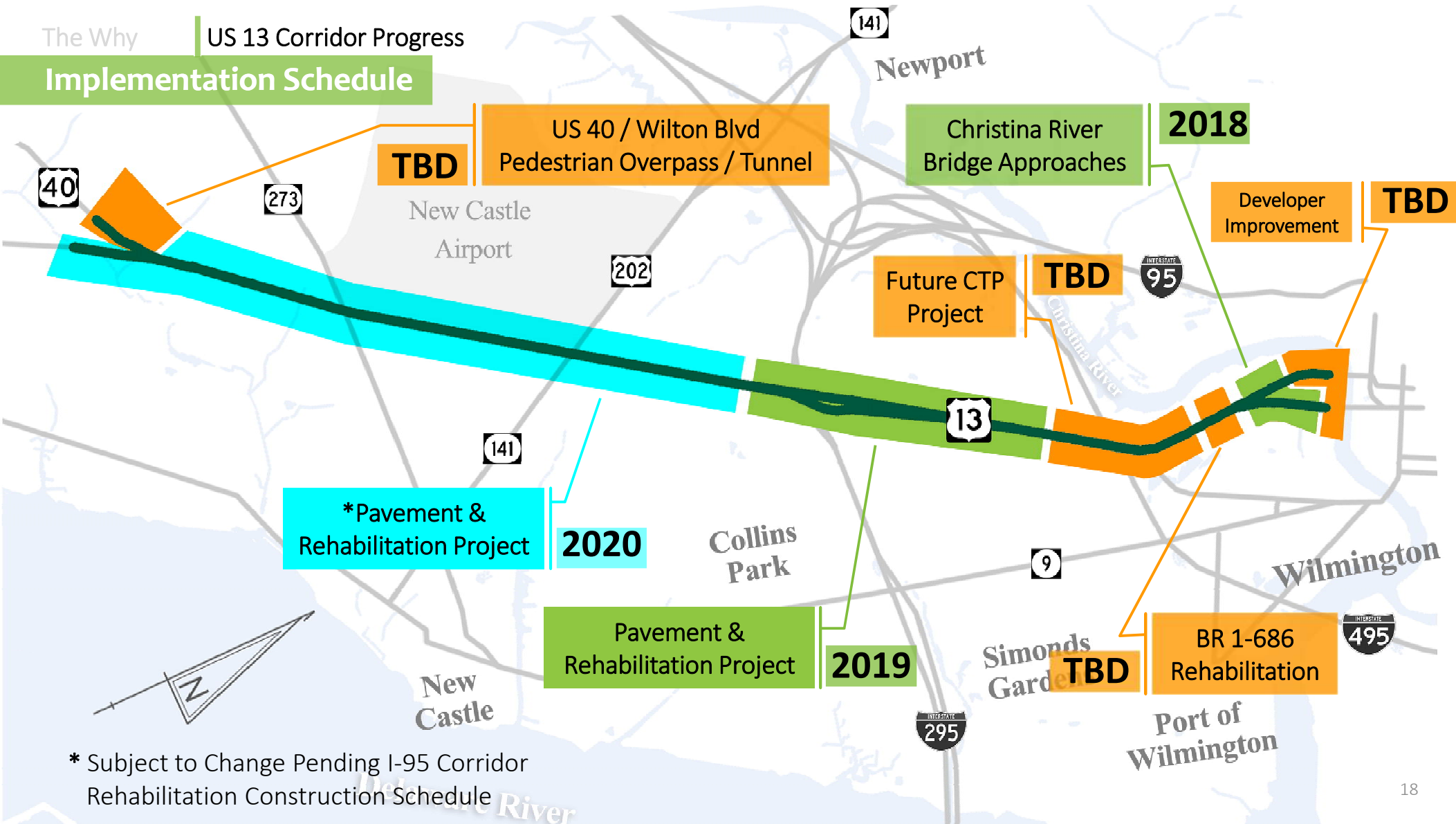
Final Plans - Winter 2019



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Rehabilitation construction schedule

## Implementation Schedule

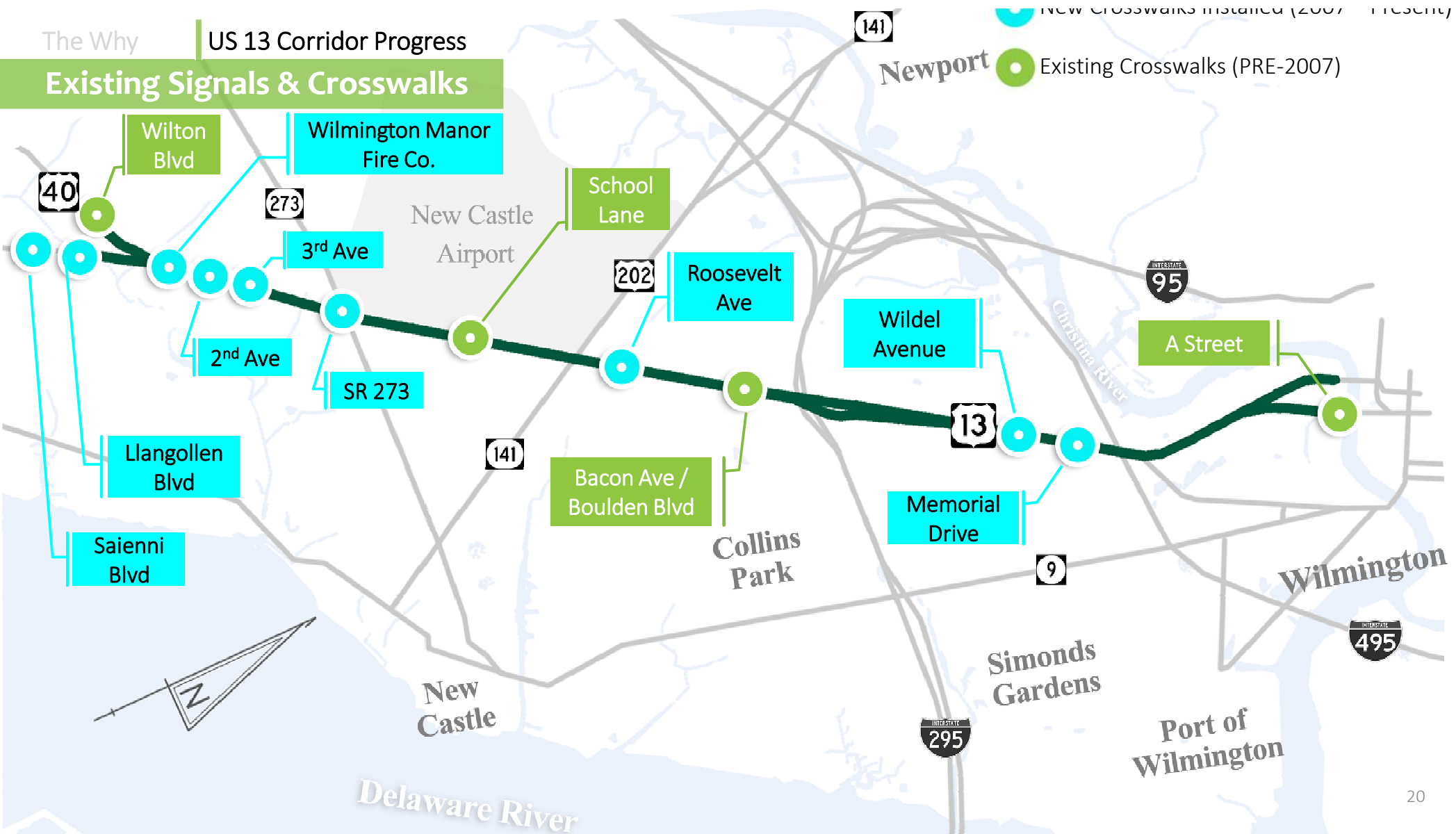


# Recommended Improvements

*(from 8.22.17 Pedestrian Council Meeting)*

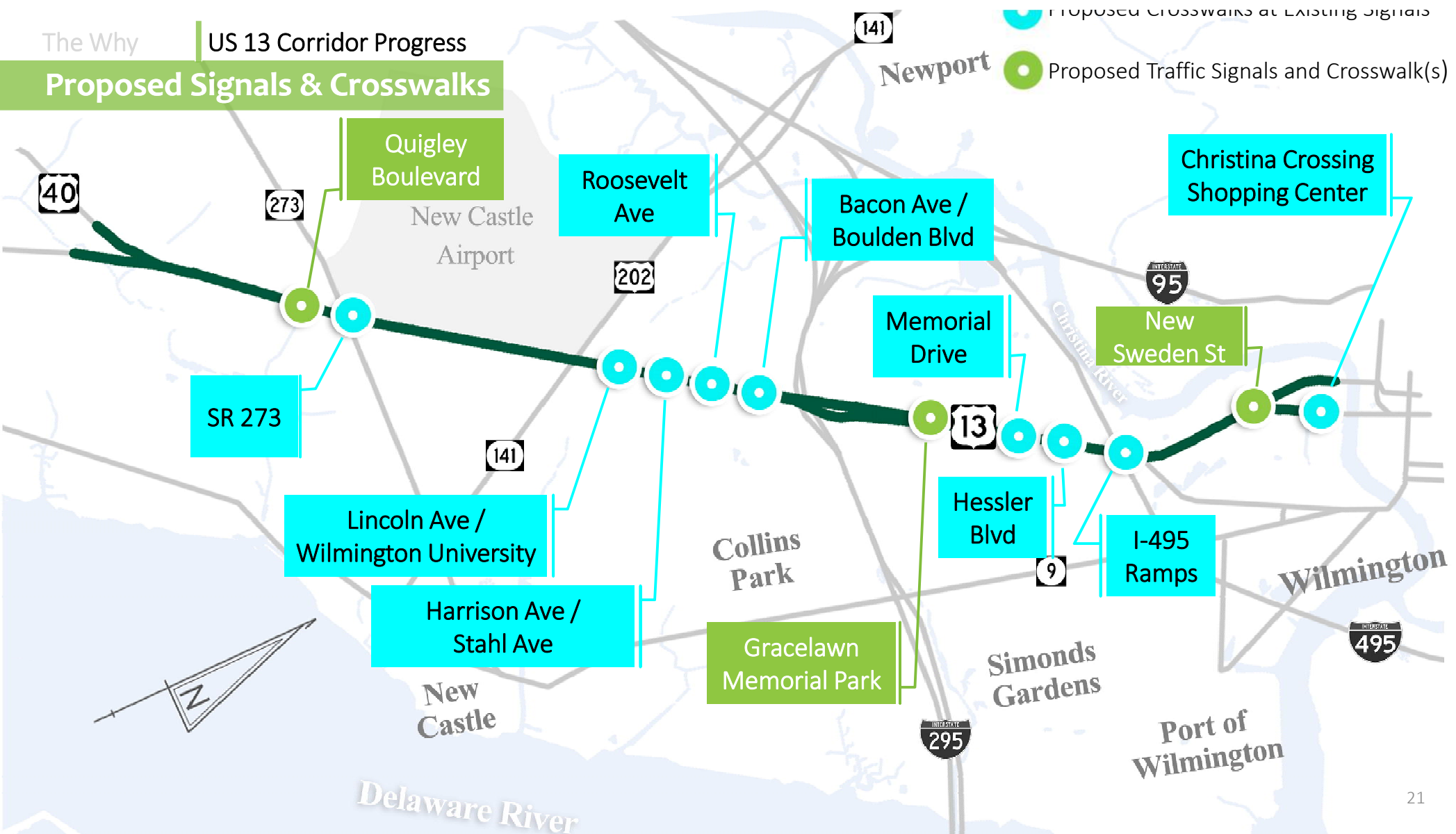
- **Signalized Crosswalks**
- Corridor Lighting
- ADA curb ramp upgrades
- Provide missing sidewalk links
- Relocate/consolidate transit stops
- Enhanced Signing & Striping
- Education & Enforcement
- Median Fencing

## Existing Signals & Crosswalks



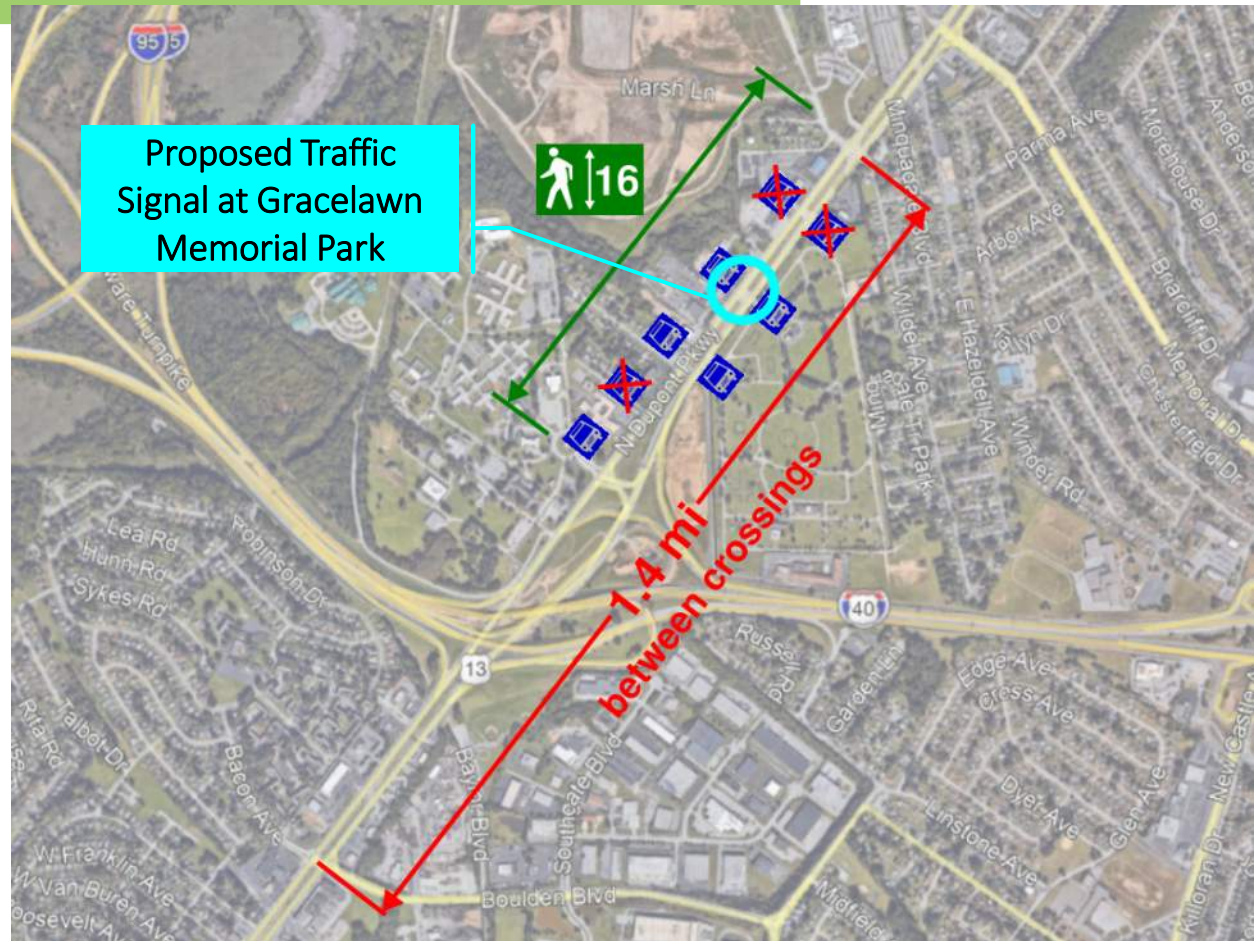


## Proposed Signals & Crosswalks



# New Signal at Gracelawn Memorial Park

- Provides new pedestrian crossing opportunity – 1.4 miles between existing crossings
- Significant transit ridership and transit modifications
- Deter mid-block pedestrian crossings in conjunction with median fencing (16 / hour)
- Warranted based on vehicular volumes
- Previous history / Legislator request for signal

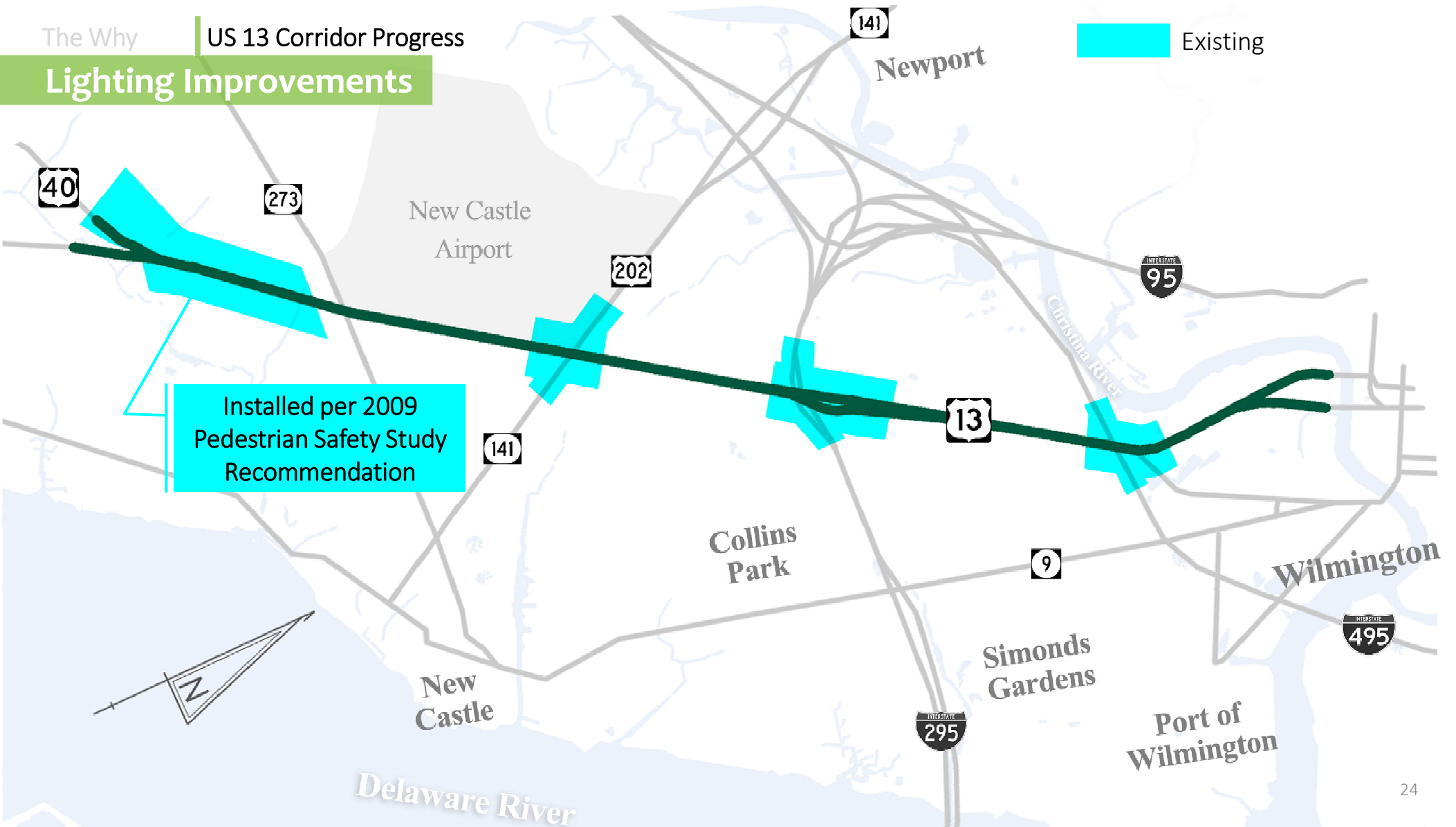


# Recommended Improvements

*(from 8.22.17 Pedestrian Council Meeting)*

- Signalized crosswalks
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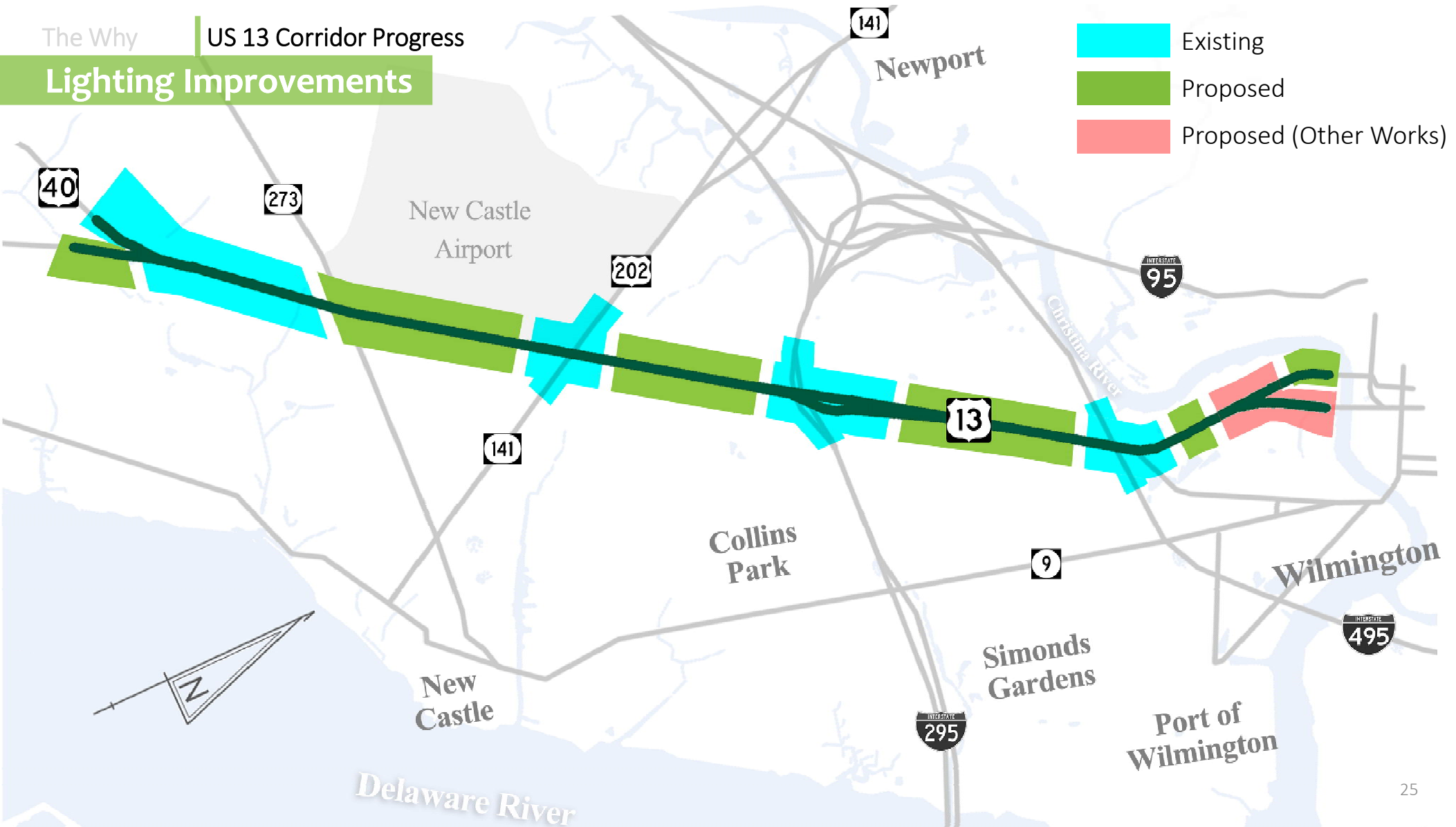
## Lighting Improvements



The Why

US 13 Corridor Progress

## Lighting Improvements





# Effects of Lighting on Pedestrian Safety

In five states (New Mexico, South Carolina, Texas, Delaware, and Louisiana), 80 percent or more of pedestrian fatalities occurred in the dark based on the past three years of FARS data (Table 4).

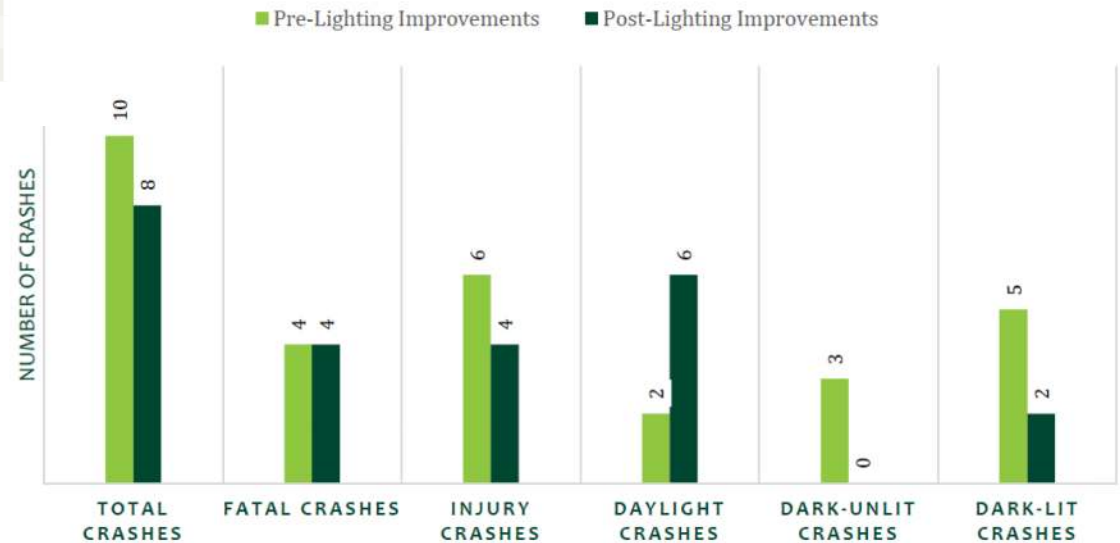
**Table 4** States Where  $\geq 80\%$  of Pedestrian Fatalities Occurred in the Dark (2014-2016)

State	Total Pedestrian Fatalities with Known Light Levels	Pedestrian Fatalities that Occurred in Dark	
		#	%
New Mexico	201	169	84%
South Carolina	373	309	83%
Texas	1,695	1,356	80%
Delaware	89	71	80%
Louisiana	334	266	80%

Source: FARS


- US 40 to SR 273 –Lighting Installed 2011
- 4 years prior: 8 nighttime crashes, 4 fatalities
- 4 years after: 2 nighttime crashes, 2 fatalities
- 60% of pedestrian crashes occurred at night for entire study area from 2007-2016

## PRE & POST LIGHTING IMPROVEMENTS EVALUATION

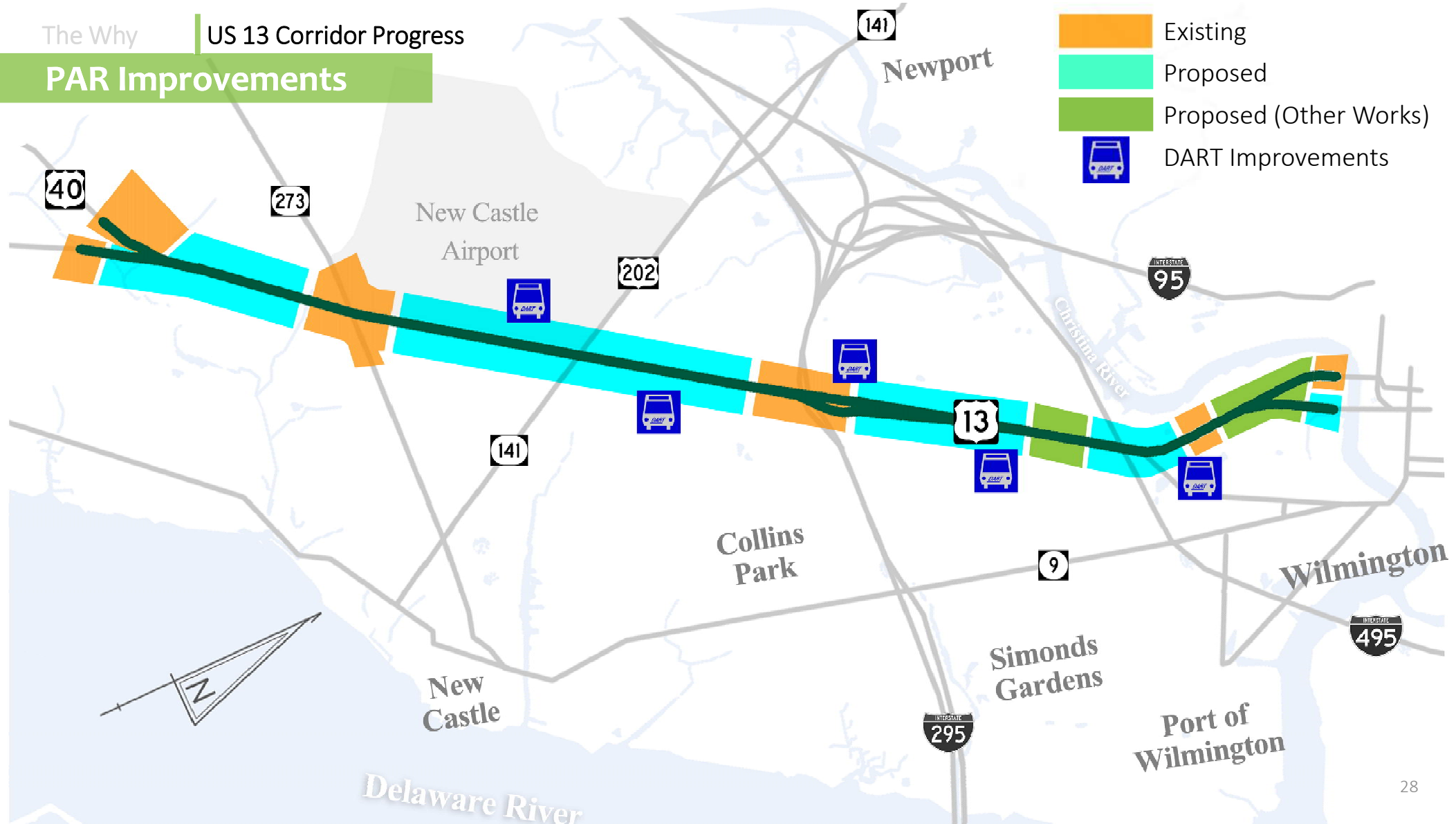


# Recommended Improvements

*(from 8.22.17 Pedestrian Council Meeting)*

- Signalized Crosswalks
  - Corridor Lighting
  - **ADA curb ramp upgrades**
  - **Provide missing sidewalk links**
  - **Relocate/consolidate transit stops**
  - Enhanced Signing & Striping
  - Education & Enforcement
  - Median Fencing
- 
- PAR Improvements

## PAR Improvements



# Recommended Improvements

*(from 8.22.17 Pedestrian Council Meeting)*

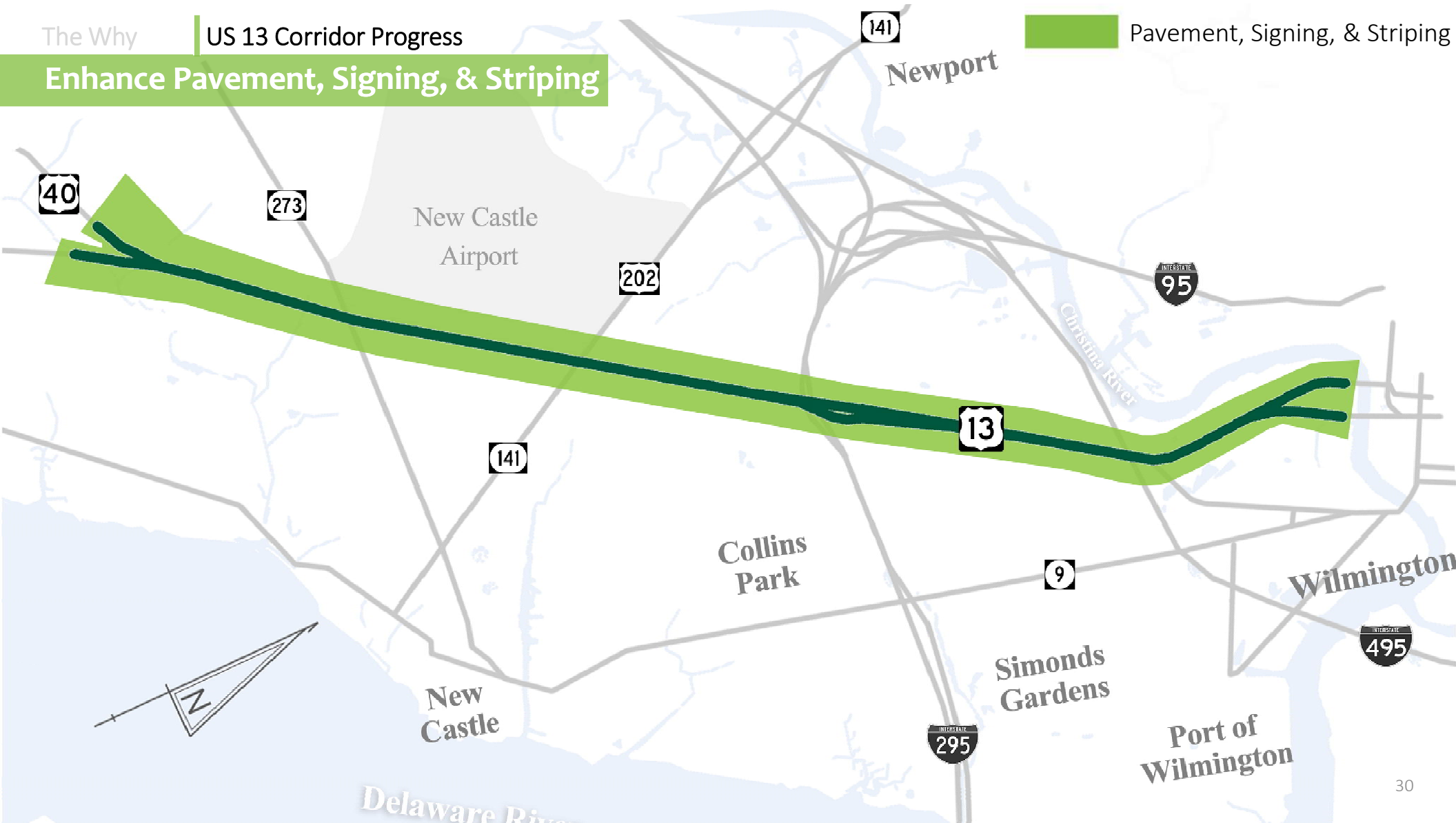
- Signalized Crosswalks
- Corridor Lighting
- ADA curb ramp upgrades
- Provide missing sidewalk links
- Relocate/consolidate transit stops
- **Enhanced Pavement, Signing & Striping**
- Education & Enforcement
- Median Fencing

The Why

US 13 Corridor Progress

## Enhance Pavement, Signing, & Striping

Pavement, Signing, & Striping





# Recommended Improvements

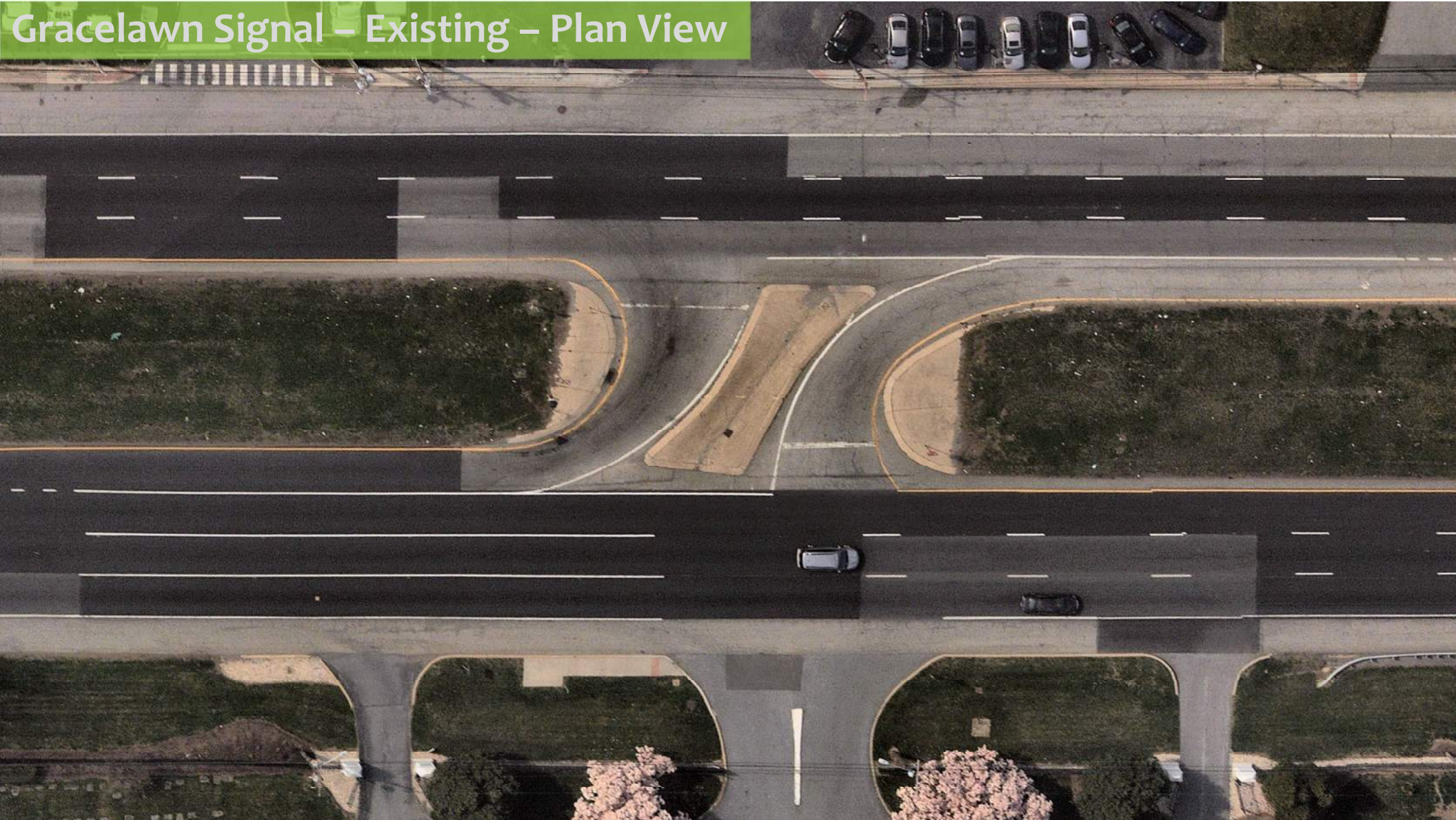
*(from 8.22.17 Pedestrian Council Meeting)*

- **Signalized Crosswalks**
- **Corridor Lighting**
- **ADA curb ramp upgrades**
- **Provide missing sidewalk links**
- **Relocate/consolidate transit stops**
- **Enhanced Pavement, Signing & Striping**
- **Education & Enforcement**
- **Median Fencing**



Sample Visualization Examples

# Gracelawn Signal – Existing – Plan View





# Gracelawn Signal – Proposed - Plan View

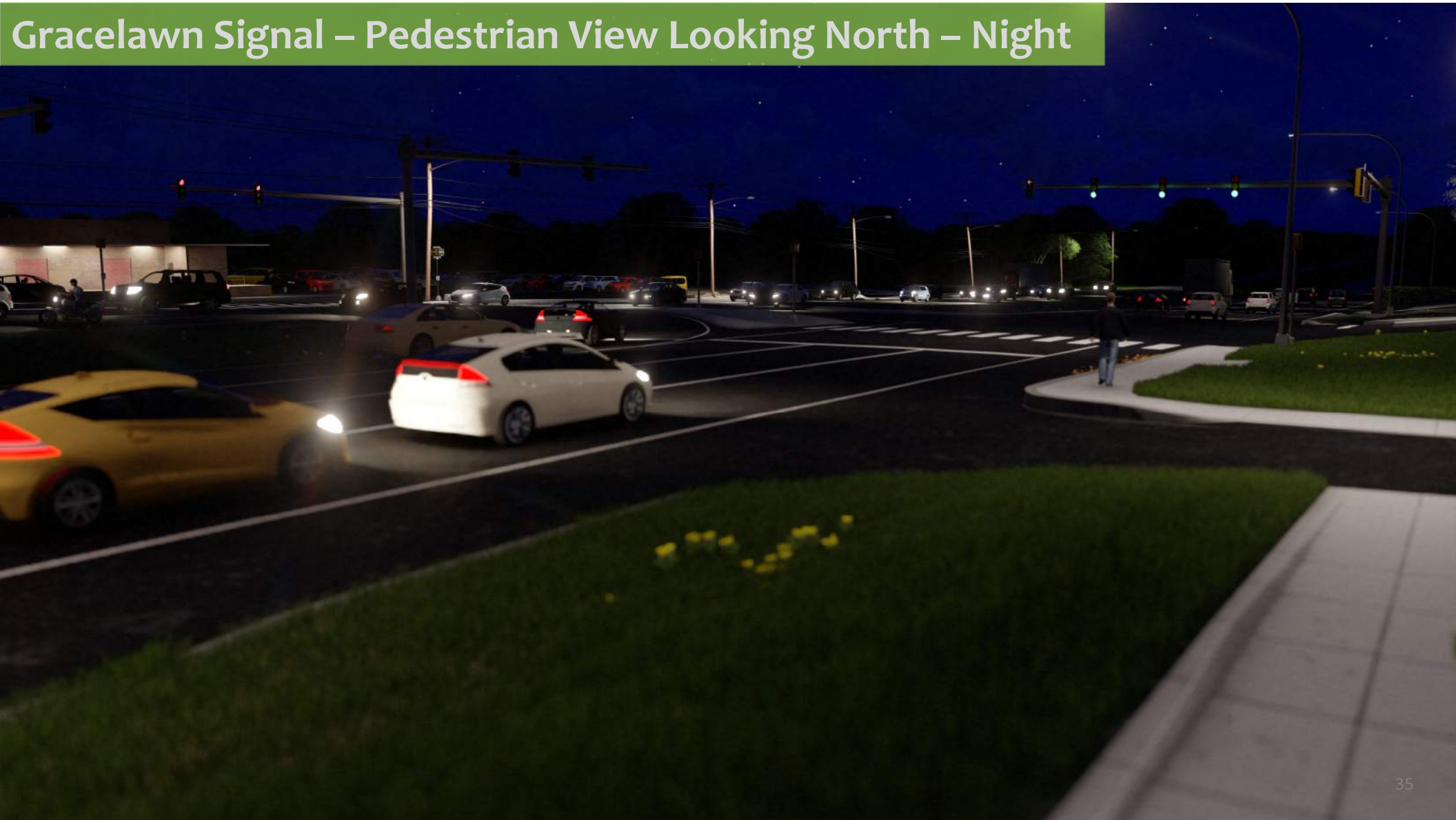




# Gracelawn Signal – Pedestrian View Looking North - Day



## Gracelawn Signal – Pedestrian View Looking North – Night





## Gracelawn Signal – Looking Southbound – Day

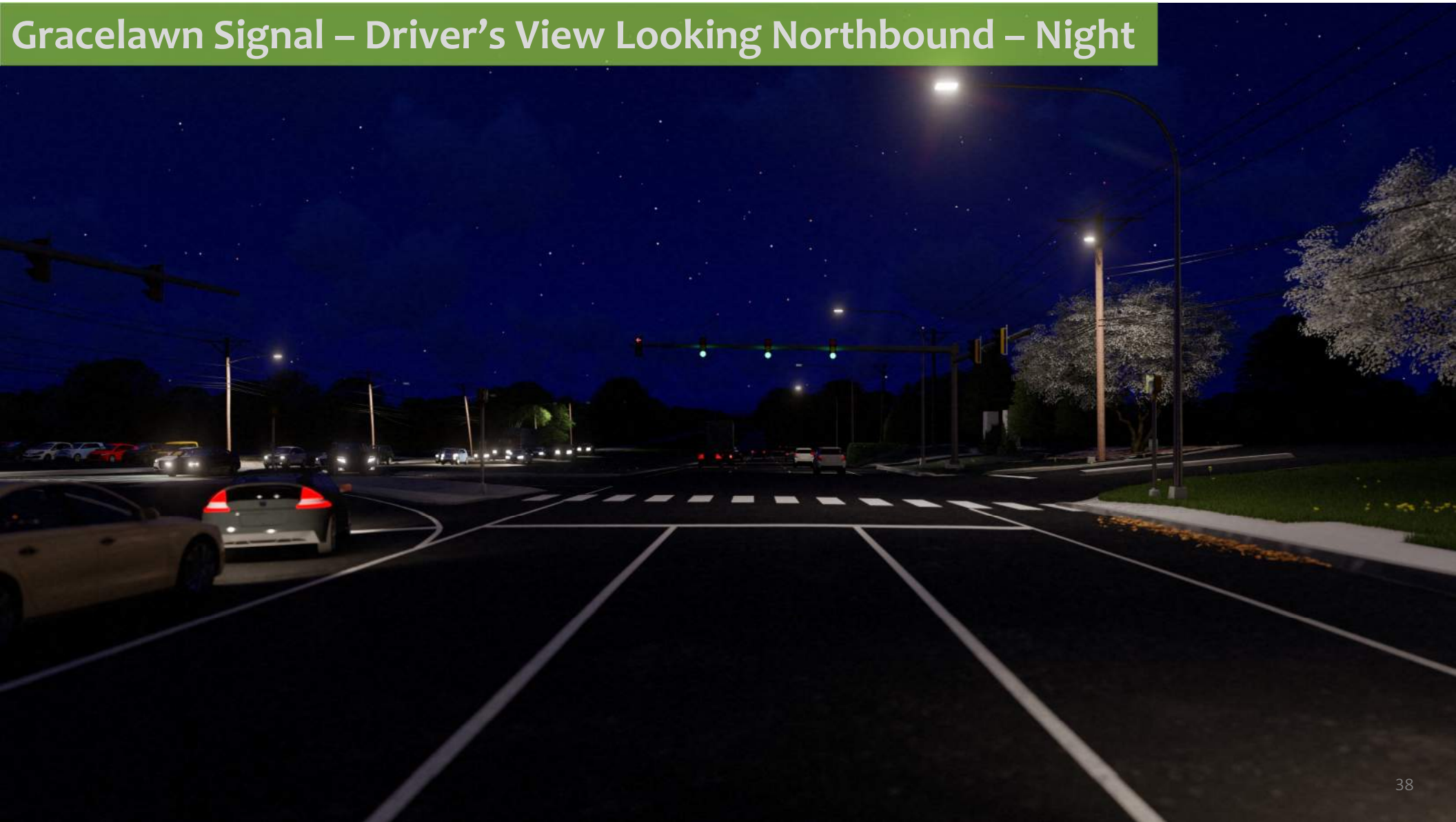


# Gracelawn Signal – Looking Southbound – Night





## Gracelawn Signal – Driver's View Looking Northbound – Night



## Gracelawn Signal – Pedestrian View Looking West – Day



## Gracelawn Signal –Pedestrian View Looking West – Night





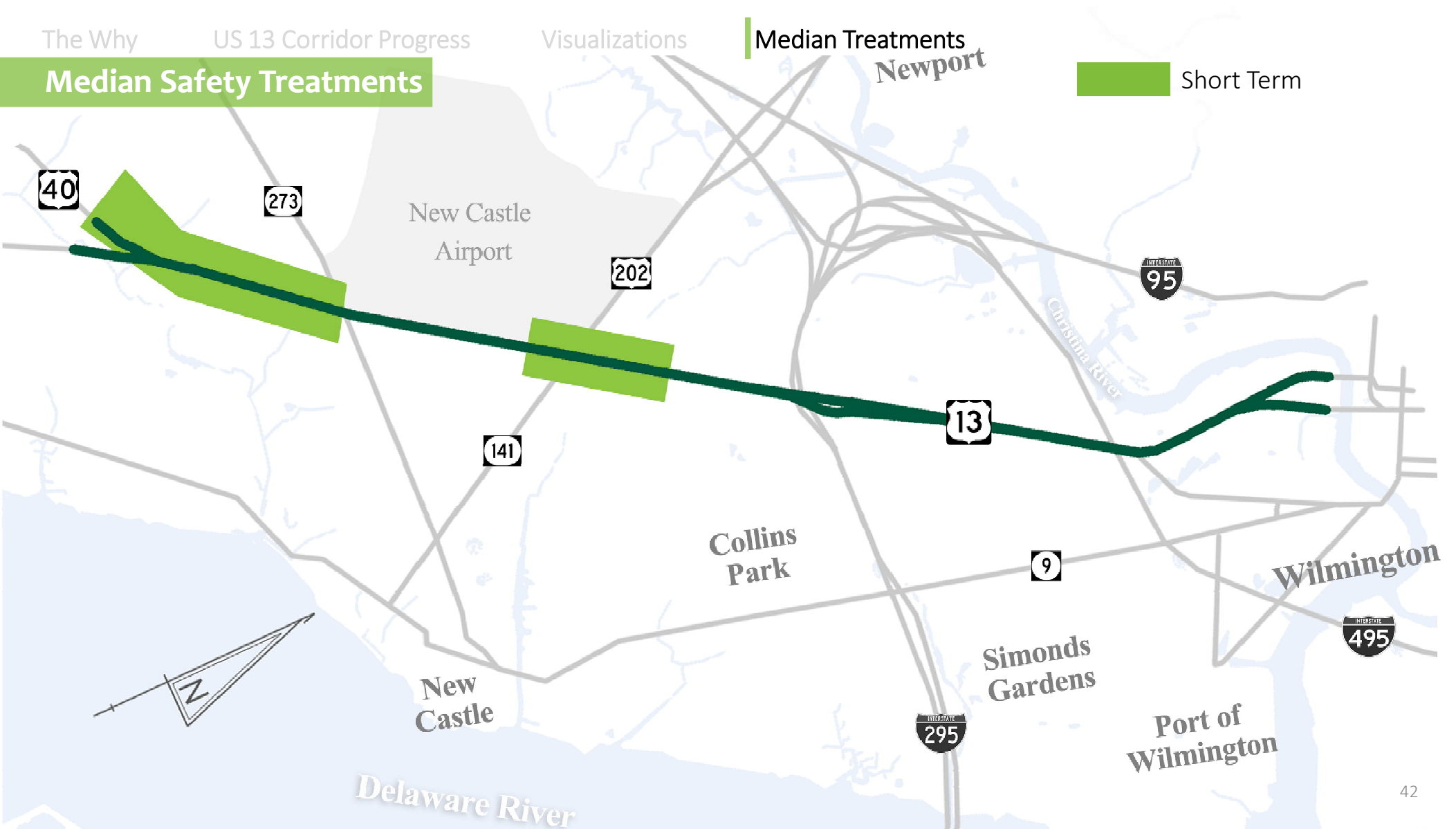
# Recommended Improvements

*(from 8.22.17 Pedestrian Council Meeting)*

- Signalized Crosswalks
- Corridor Lighting
- ADA curb ramp upgrades
- Provide missing sidewalk links
- Relocate/consolidate transit stops
- Enhanced Signing & Striping
- **Median Fencing**
- Education & Enforcement

## Median Safety Treatments

Short Term



The Why

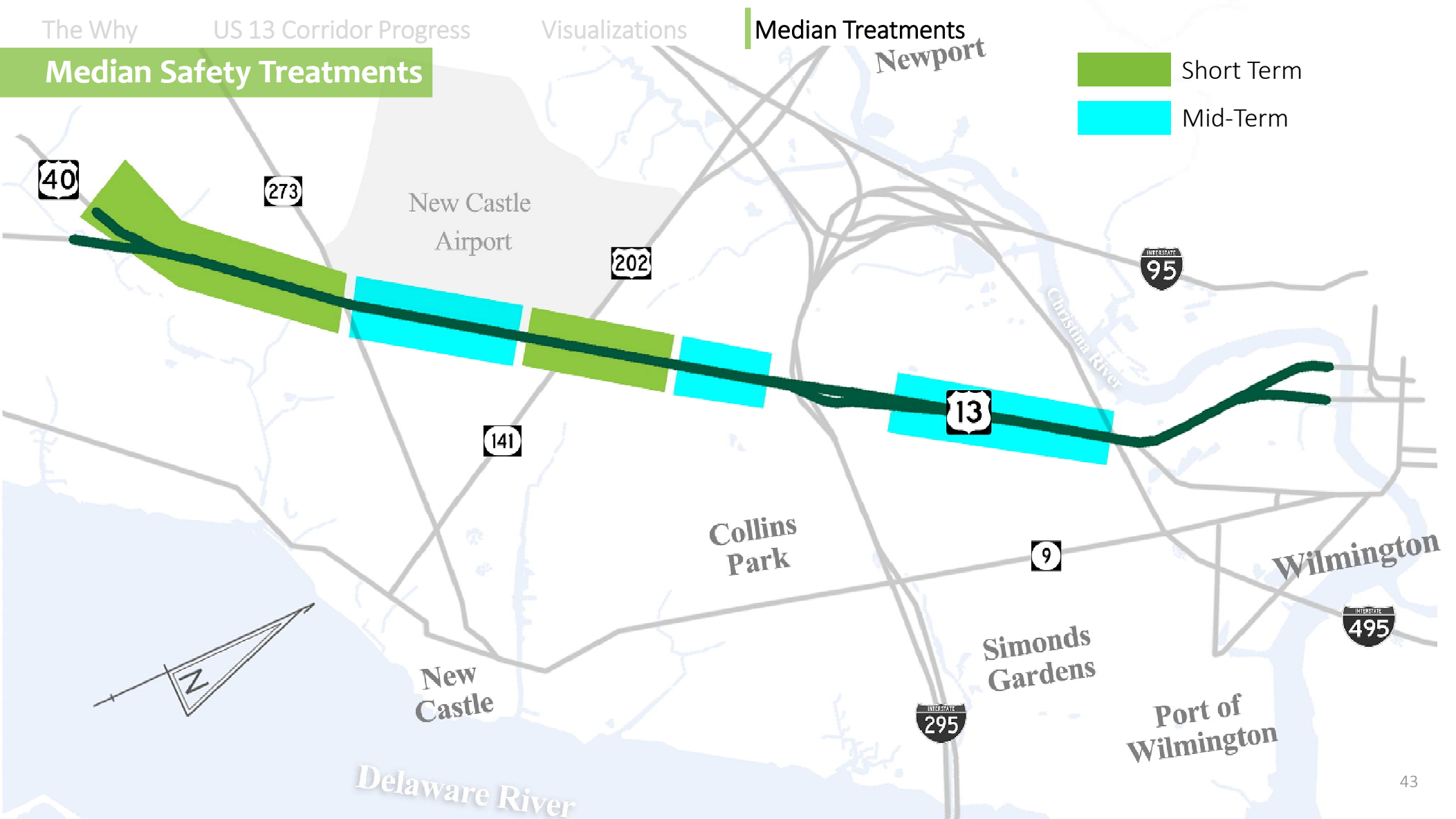
US 13 Corridor Progress

Visualizations

Median Treatments

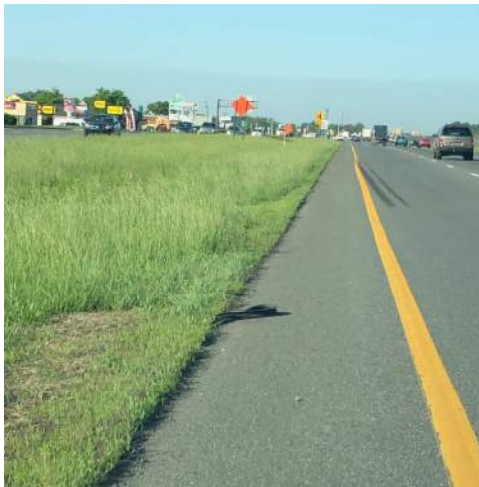
## Median Safety Treatments

- Short Term
- Mid-Term



# Median Treatments

- Median Safety Committee Meetings
- Proven Results
- Existing Conditions & Challenges
- Treatments Considered
- Path Forward



Transmittal - US 13 Pedestrian Improvements Program

## MEETING MINUTES

**Subject:** US 13 Pedestrian Improvements Program - Median Safety Working Group Kickoff Meeting  
**Contract:** T201601102 - US 13 Pedestrian Improvements  
**Meeting Date:** March 22, 2018, 11 AM  
**Meeting Location:** Pennoni - 121 Continental Drive, Suite 207, Newark, DE 19713  
**Attendees:**

Agreement 1716, Task Order No. 1.3  
 Contract Transactions  
 US 13, US 40 to Memorial Drive Pedestrian Improvements

## MEETING MINUTES

**Subject:** US 13 Pedestrian Improvements Program - Median Safety Working Group Meeting No. 2  
**Contract:** T201601102 - US 13 Pedestrian Improvements  
**Meeting Date:** May 24, 2018, 10 AM

Agreement 1716, Task Order No. 1.3  
 Contract Transactions  
 US 13, US 40 to Memorial Drive Pedestrian Improvements

## MEETING MINUTES

**Subject:** US 13 Pedestrian Improvements Program - Median Safety Working Group Meeting No. 3  
**Contract:** T201601102 - US 13 Pedestrian Improvements  
**Meeting Date:** June 28, 2018, 10 AM  
**Meeting Location:** Pennoni - 121 Continental Drive, Suite 207, Newark, DE 19713  
**Attendees:**

Name	Representing	Phone No.	Email
Mark Tudor	DelDOT - PD-North	760-2275	Mark.Tudor@state.de.us
Tom Brooks	DelDOT - PD-North	760-2353	Tom.Brooks@state.de.us
Mark Luszcz (via phone)	DelDOT - Traffic	659-4062	Mark.Luszcz@state.de.us
Mike Beulah	DelDOT - PMD	760-2067	Mike.Beulah@state.de.us
Kevin Canning	DelDOT - M&O	326-4471	Kevin.Canning@state.de.us
Brian Schilling	DelDOT - M&O	326-4525	Brian.Schilling@state.de.us
Tom Nickel	DelDOT - PMD	760-2401	Thomas.Nickel@state.de.us
Eric Cimo	DelDOT - Utilities	760-2642	Eric.Cimo@state.de.us
Debbie Kukulich	DelDOT - Utilities	760-2345	Deborah.Kukulich@state.de.us
Philip Horary	Pennoni	351-5243	Phorary@pennoni.com
Kyle Clevenger	Pennoni	351-5263	KClevenger@pennoni.com
Mike Steimer	Pennoni	351-5254	MSteimer@pennoni.com

**Discussion:**

The meeting was focused on reviewing the DRAFT Pedestrian Council Presentation that Pennoni developed to highlight progress on the US 13 Pedestrian Improvements project and outcomes of the Median Safety Working Group meetings. Below is a list of discussion points and recommendations provided by DelDOT representatives for revisions to the presentation.

- Present the various median treatment alternatives that were considered and focus on the preferred alternatives that the Median Safety Working Group has developed:
  - Provide maintenance provision for grass growth in the median while implementing narrow mow strips along the edge of pavement (Kevin Canning to discuss with Darin Callaway if selective mowing in Spring will promote growth). Consider supplemental shallow-rooted vegetation
  - Install aluminum decorative fencing throughout a majority of the corridor, particularly at locations with wide grass median. Consider supplemental shallow-rooted vegetation.
  - Use concrete barrier with decorative fencing mounted on top in areas with narrower medians and guardrail
  - Consider supplemental post-and-chain systems along the outside shoulders (in conjunction with median treatment), particularly along stretches of roadway without commercial entrances or other conflicts
  - Preferred options are subject to utility company input and community/legislative input.

from last month's action  
 id at 10 AM at Pennoni's  
 in advance of the July 24,  
 landscaping  
 a controlled  
 in the center  
 al grass and  
 DelDOT

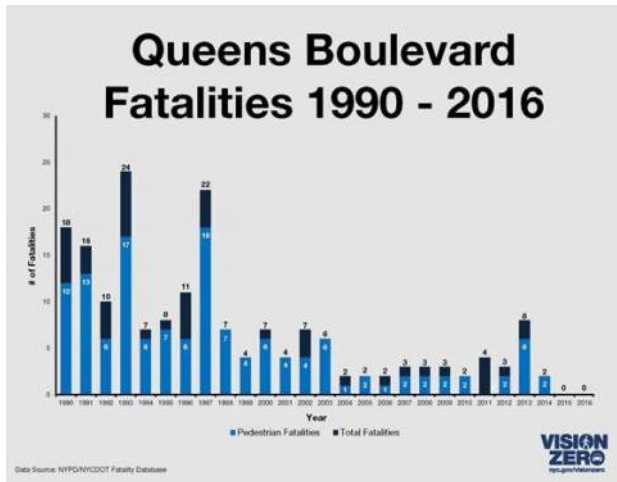
er detail to  
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ian landscaping along US 13  
 e the landscaping as needed.  
 ng ornamental fence over  
 DelDOT

US 13 median and notify  
 dian treatment options at  
 lings is to determine  
 ennoni will prepare a draft  
 ng.

Pennoni  
 DelDOT

# Proven Results



“The Boulevard of Death”  
NY-25/Queens Blvd - Queens, NYC





# Proven Results

- 16 Median Treatment Sites & 16 Control Sites
- At Median Treatment Sites:
  - 14% Reduction in Total Crashes
  - 9% Reduction in Severe Crashes
  - No Effect on Ped/Bike Crashes
  - 86% Reduction in Ped/Bike Fatalities
- Rate of bike/ped crashes unchanged, but severity drastically reduced – moved from mid-block locations to intersections
- Survey Results:
  - >60% likely to cross at mid-block locations
  - >50% believe median treatments effective in preventing mid-block crossings

MD-17-SHA/UM/4-28

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor



Pete K. Rahn, Secretary  
Gregory Slater, Administrator

MARYLAND DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION

Research Report

ANALYZING THE IMPACT OF MEDIAN TREATMENTS ON  
PEDESTRIAN/BICYCLIST SAFETY

Lei Zhang, Sepehr Ghader, Arash Asadabadi,  
Mark Franz, Chenfeng Xiong, and Julia Litchford

National Transportation Center  
Department of Civil and Environmental Engineering  
University of Maryland

FINAL REPORT  
May 2017

# Existing Conditions & Challenges

- Existing Features in the Median:

Utilities and Drainage Facilities



Landscaping



Guardrail



# Existing Conditions & Challenges

- Existing Features in the Median (continued):

Emergency Service Access



Structures



Variable Median



# Existing Conditions & Challenges

- Location / Alignment
- Aesthetics
- Maintenance
- Crashworthiness
- Footing/foundation depth
- Cost





# Treatments Considered

- Guardrail
- Cable Barrier
- Chain Link Fence



# Treatments Considered

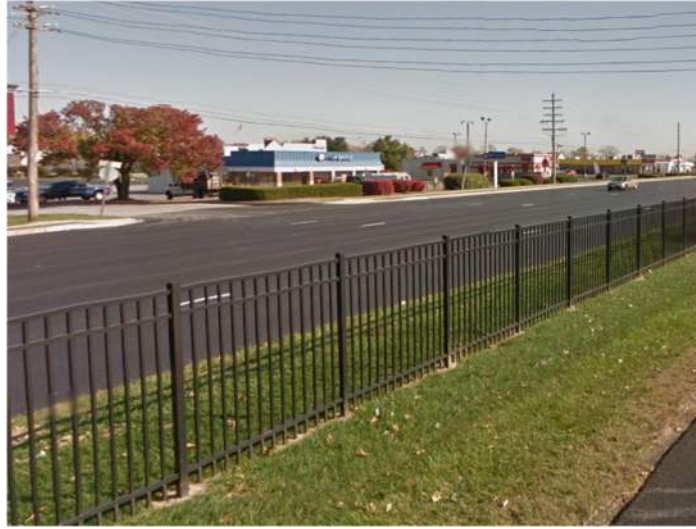
- Concrete Barrier
- Concrete Barrier with Bracket Mounted Fence
- Vegetation / Brush / Landscaping





# Treatments Considered

- Post & Chain Fence – UD and Del State
- Decorative Fence
- Decorative Fence with Supplemental Landscaping



# Median Fencing throughout the region

- Applications in the region

Contract Description	State	Agency	Posted Speed Limit	AADT	Type	Status	Location / Application
US 13 from N Dover Mall Entrance to College Rd	DE	DeIDOT	45	61,000	Post and Chain	Construction Complete	SB Shoulder
SR 141 from Morton Ave to SR 34	DE	DeIDOT	35	32,000	Metal	Construction Complete	SB Shoulder / Frontage
S College Ave from Kent Way to Amstel Ave	DE	DeIDOT	25	10,500	Post and Chain	Construction Complete	Shoulders
US 40 from Old Frederick Rd to N Athol Ave	MD	Balt. City DOT	30	TBD	Metal	Construction Complete	Median
Orleans St from N Central Ave to N Caroline St	MD	Balt. City DOT	TBD	TBD	Metal	Construction Complete	Median
MD 41 from Cold Spring Ln to Pentwood Rd	MD	Balt. City DOT	TBD	TBD	Metal	Construction Complete	Median
Cold Spring Ln from Falls Rd to I-83	MD	Balt. City DOT	TBD	TBD	Metal	Construction Complete	Median
Randolf Rd from Selfridge Rd to Veirs Mill Rd	MD	MC DOT	TBD	TBD	Metal	Construction Complete	Median
MD 170 from Stoney Run Rd to S Camp Meade Rd	MD	NG	*	*	Metal & Wire	Construction Complete	NB Shoulder
US 1 from Hartwick Rd to Knox Rd	MD	SHA	25	24,000	Metal	Construction Complete	Median
SR 214 from Addison Rd to Cabin Branch Rd	MD	SHA	30	53,000	Metal	Construction Complete	Median

Contract Description	State	Agency	Posted Speed Limit	AADT	Type	Status	Location / Application
US 29 at Briggs Chaney Rd Interchange	MD	SHA	55	61,000	Spiked Metal	Construction Complete	NB Shoulder
US 40 from McCain Dr to Waverly Dr	MD	SHA	45	48,000	Powder-Coated Aluminum	Construction Complete	Median
US 50 BUS from Ward St to 1000' E of Main St	MD	SHA	35	20,500	Metal	Contract Awarded	Median
SR 528 from SR 90 to Convention Center Dr	MD	SHA	35	30,000	"Dune"	Contract Awarded	Median
SR 650 from Larsh Ave to Devinshire Ave	MD	SHA	35	35,000	Metal	Construction Complete	SB Shoulder / Frontage
SR 650 from Holton Ln to Merrimac Dr	MD	SHA	35	38,000	Metal	Construction Complete	Median
Las Vegas Blvd from Harmon Ave to Tropicana	NV	TBD	30	80,000	TBD	Construction Complete	Median
Queens Blvd from SR 678 to Roosevelt Ae	NY	NYDOT	30	160,000	Metal	Construction Complete	Median / Frontage
City Hall Ave from St Paul Blvd to Monticello Ave	VA	VDOT	25	8,300	Metal	Construction Complete	Median
St Paul Blvd from E Charlotte St to Market St	VA	VDOT	30	41,000	Metal	Construction Complete	Median
York St from Elizabeth River trail to Dunmore St	VA	HRT	25	500	Metal	Construction Complete	Shoulder



# Median Fencing Examples

US 40, Frederick, MD



US 1, College Park, MD



City Hall Ave, Norfolk, VA



Las Vegas Blvd, Las Vegas, NV

# US13 Decorative Fencing Concept



Before



# US13 Decorative Fencing Concept



After

# Path Forward

- End Mowing Operations - Implemented
- Map Utility Facilities & Drainage Systems
- Advertise Median Treatment Contract which Includes:
  - Decorative fencing
  - Concrete barrier with bracket mounted fence
  - Post & chain fence where feasible on adjacent sidewalks
  - Supplemental vegetation where appropriate





# Recommended Improvements

*(from 8.22.17 Pedestrian Council Meeting)*

- Signalized Crosswalks
- Corridor Lighting
- ADA curb ramp upgrades
- Provide missing sidewalk links
- Relocate/consolidate transit stops
- Enhanced Signing & Striping
- Median Fencing
- **Education & Enforcement**

# Education & Enforcement



(2013)



(2014)



(2012)



59

(2014)

# Agenda

- The Why – Pedestrian Safety Improvements
- US 13 Corridor Progress
- Visualization Examples
- Median Treatments
- Education and Enforcement
- **Q&A, Next Steps**

